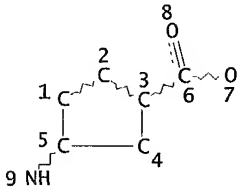
9 → 10

SOLOLA 10/019,217

=> d que l35
L13 STR

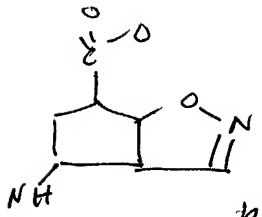
parent STR for all STRs

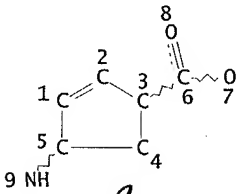


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L15 1511 SEA FILE=REGISTRY SSS FUL L13
L16 18 SEA FILE=REGISTRY ABB=ON PLU=ON L15 AND NOC3-C5/ES →
L17 STR





reactant → product

9 10

NODE ATTRIBUTES:
CONNECT IS E2 RC AT 1
CONNECT IS E2 RC AT 2
CONNECT IS E2 RC AT 4
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
L19 85 SEA FILE=REGISTRY SUB=L15 SSS FUL L17
L31 88 SEA FILE=CAPLUS ABB=ON PLU=ON L19
L32 62 SEA FILE=CAPLUS ABB=ON PLU=ON L31(L)(RCT OR RACT)/RL ← reactant role
L34 5 SEA FILE=CAPLUS ABB=ON PLU=ON L16(L)PREP/RL ← product role
L35 5 SEA FILE=CAPLUS ABB=ON PLU=ON L32 AND L34 5 cites

=> d ibib abs hitstr l35 1-5

L35 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2002:314926 CAPLUS
DOCUMENT NUMBER: 136:325536
TITLE: Process for preparation of 4-N-substituted amino-2-aza-1-oxabicyclo[3.3.0]oct-2-ene-6-carboxylic acid esters and process for preparation of their intermediates
INVENTOR(S): Fukumoto, Takashi; Torihara, Masahiro; Tamai, Yoshin
PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032885	A1	20020425	WO 2001-JP8627	20011001
W: US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002193901	A2	20020710	JP 2001-281299	20010917
JP 2002234878	A2	20020823	JP 2001-281300	20010917
JP 2002284748	A2	20021003	JP 2001-281301	20010917
EP 1334969	A1	20030813	EP 2001-970314	20011001
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				

PRIORITY APPLN. INFO.:
JP 2000-317718 A 20001018
JP 2000-369723 A 20001205
JP 2001-7210 A 20010116
WO 2001-JP8627 W 20011001

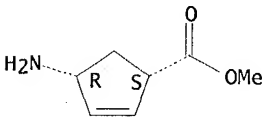
OTHER SOURCE(S): CASREACT 136:325536; MARPAT 136:325536

AB 4-N-Substituted amino-2-aza-1-oxabicyclo[3.3.0]oct-2-ene-6-carboxylic acid esters, useful as pharmaceutical intermediates, are prepd. : (a) by reacting 2-azabicyclo[2.2.1]hept-5-en-3-one with an alc. in the presence of a Bronsted acid to form a salt of cis-4-amino-2-cyclopentene-1-carboxylic acid ester, (b) reacting this salt with a compd. for introducing an amino-protecting group in the presence of a base to form a cis-4-N-substituted amino-2-cyclopentene-1-carboxylic acid ester, (c) and reacting this ester with a hypohalite and an aldoxime.

IT **77745-25-6P 168683-02-1P 229613-91-6P**
414863-70-0P
RL: IMF (Industrial manufacture); **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(process for prepn. of 4-N-substituted amino-2-aza-1-oxabicyclo[3.3.0]oct-2-ene-6-carboxylic acid esters and process for prepn. of their intermediates)

RN 77745-25-6 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, methyl ester, hydrochloride, (1R,4S)-rel- (9CI) (CA INDEX NAME)

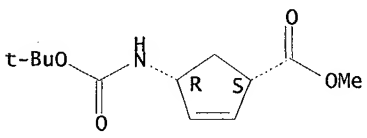
Relative stereochemistry.



● HCl

RN 168683-02-1 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1S,4R)- (9CI) (CA INDEX NAME)

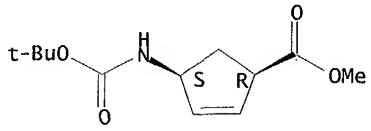
Absolute stereochemistry. Rotation (-).



RN 229613-91-6 CAPLUS

CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

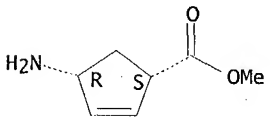


RN 414863-70-0 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, methyl ester, cis-, sulfate (1:1) (9CI) (CA INDEX NAME)

CM 1

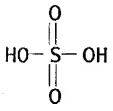
CRN 152279-17-9
CMF C7 H11 N O2

Relative stereochemistry.



CM 2

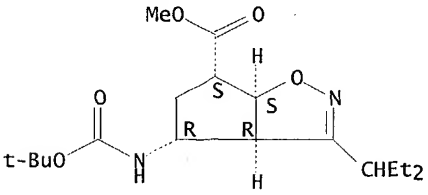
CRN 7664-93-9
CMF H2 O4 S



IT **229613-93-8P 229613-98-3P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**
(process for prepn. of 4-N-substituted amino-2-aza-1-oxabicyclo[3.3.0]oct-2-ene-6-carboxylic acid esters and process for prepn. of their intermediates)

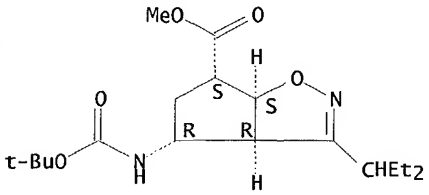
RN 229613-93-8 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



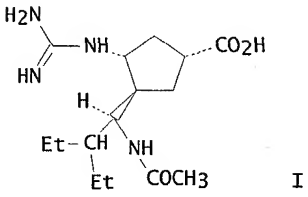
RN 229613-98-3 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:787187 CAPLUS
DOCUMENT NUMBER: 136:69605
TITLE: Systematic Structure-Based Design and Stereoselective Synthesis of Novel Multi-Substituted Cyclopentane Derivatives with Potent Anti-influenza Activity
AUTHOR(S): Chand, Pooran; Kotian, Pravin L.; Dehghani, Ali; El-Kattan, Yahya; Lin, Tsu-Hsing; Hutchison, Tracy L.; Babu, Y. Sudhakar; Bantia, Shanta; Elliott, Arthur J.; Montgomery, John A.
CORPORATE SOURCE: BioCryst Pharmaceuticals Inc., Birmingham, AL, 35244, USA
SOURCE: Journal of Medicinal Chemistry (2001), 44(25), 4379-4392
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

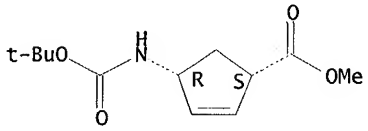
AB The design and synthesis of novel, orally active, potent, and selective inhibitors of influenza neuraminidase differing structurally from existing neuraminidase inhibitors are described. X-ray crystal structures of complexes of neuraminidase with known five- and six-membered ring inhibitors revealed that potent inhibition of the enzyme is detd. by the relative positions of the interacting inhibitor substituents (carboxylate, glycerol, acetamido, hydroxyl) rather than by the abs. position of the central ring. This led us to design potential neuraminidase inhibitors in which the cyclopentane ring served as a scaffold for substituents (carboxylate, guanidino, acetamido, alkyl) that would interact with the four binding pockets of the neuraminidase active site at least as effectively as those of the established six-membered ring inhibitors such as DANA, zanamivir, and oseltamivir. A mixt. of the isomers was prepd. initially. Protein crystallog. of inhibitor-enzyme complexes was used to screen mixts. of isomers in order to identify the most active

stereoisomer. A synthetic route to the identified candidate cyclopentane I was developed, which featured (3+2) cycloaddn. of 2-ethylbutyronitrile oxide to Me (1S,4R)-4[(tert-butoxycarbonyl)amino]cyclopent-2-ene-1-carboxylate. Structures of the synthetic compds. were verified by NMR spectroscopy using nuclear Overhauser effect methodol. Wo new neuraminidase inhibitors discovered in this work, I has IC50 values vs neuraminidase from influenza A and B of <1 nM. These IC50 values are comparable or superior to those for zanamivir and oseltamivir, agents recently approved by the FDA for treatment of influenza.

IT **168683-02-1P 229613-83-6P 229613-93-8P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(systematic structure-based design and stereoselective synthesis of novel multi-substituted cyclopentane derivs. with potent anti-influenza activity)

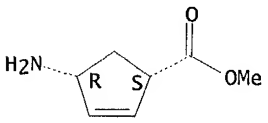
RN 168683-02-1 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



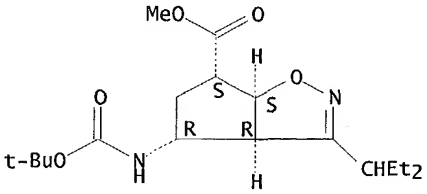
RN 229613-83-6 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, methyl ester, hydrochloride, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 229613-93-8 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

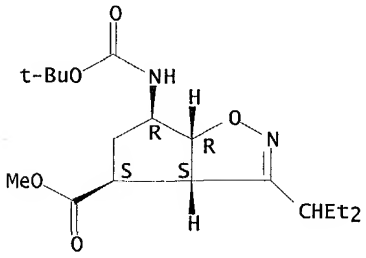
Absolute stereochemistry. Rotation (+).



IT **383910-22-3P 383910-24-5P 383910-25-6P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(systematic structure-based design and stereoselective synthesis of novel multi-substituted cyclopentane derivs. with potent anti-influenza activity)

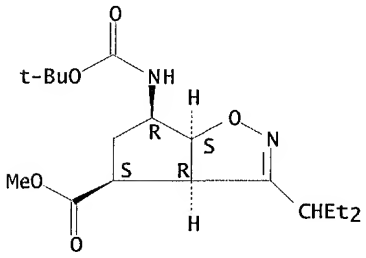
RN 383910-22-3 CAPLUS
CN 4H-Cyclopent[d]isoxazole-4-carboxylic acid, 6-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aS,4S,6R,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



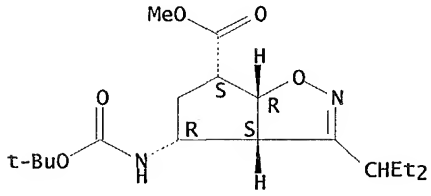
RN 383910-24-5 CAPLUS
CN 4H-Cyclopent[d]isoxazole-4-carboxylic acid, 6-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4S,6R,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 383910-25-6 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aS,4R,6S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



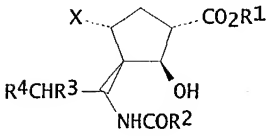
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:12411 CAPLUS
DOCUMENT NUMBER: 134:71317
TITLE: Process for preparing substituted cyclopentane derivatives and their crystalline structures
INVENTOR(S): Abdel-Magid, Ahmed F.; Bichsel, Hans-Ulrich; Korey, Daniel J.; Laufer, Guenther G.; Lehto, Erja A.;

Mattei, Sebastiano; Rey, Max; Schultz, Thomas W.; Maryanoff, Cynthia
PATENT ASSIGNEE(S): Ortho-McNeil Pharmaceutical, Inc., USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000571	A1	20010104	WO 2000-US16013	20000609
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000011902	A	20020319	BR 2000-11902	20000609
EP 1214294	A1	20020619	EP 2000-942747	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003503384	T2	20030128	JP 2001-506983	20000609
US 2002061930	A1	20020523	US 2001-991753	20011126
US 6576786	B2	20030610		
NO 2001006389	A	20020221	NO 2001-6389	20011227

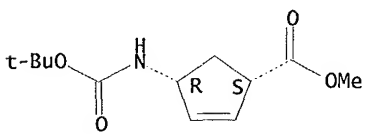
PRIORITY APPLN. INFO.: US 1999-141301P P 19990628
US 2000-590839 A1 20000609
WO 2000-US16013 W 20000609
OTHER SOURCE(S): CASREACT 134:71317; MARPAT 134:71317
GI



I

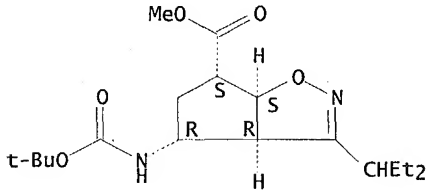
AB Substituted cyclopentane derivs. I [R1 = H, alkyl, cycloalkyl, aryl, aralkyl; R2 = H, alkyl, haloalkyl, aryl, cycloalkyl; R3, R4 = H, alkyl, alkylene, cycloalkyl, aryl; X = NHC(:NH)NH2] were prepd. E.g., (1S,2S,3R,4R,1'S)-(-)-3-[(1'-acetylamino-2'-ethyl)butyl]-4-[[(aminoimino)methyl]amino]-2-hydroxycyclopentane-1-carboxylic acid was prepd.
IT **168683-02-1**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(prepn. of substituted cyclopentane derivs.)
RN 168683-02-1 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT **229613-93-8P 316173-28-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(prepn. of substituted cyclopentane derivs.)
RN 229613-93-8 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

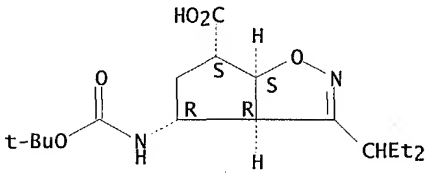


RN 316173-28-1 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, (3aR,4R,6S,6aS)-, compd. with 2-methyl-2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

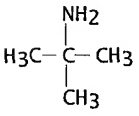
CRN 316173-27-0
CMF C17 H28 N2 O5

Absolute stereochemistry.



CM 2

CRN 75-64-9
CMF C4 H11 N



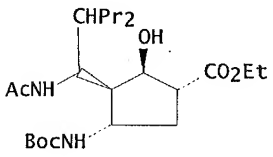
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:12400 CAPLUS
DOCUMENT NUMBER: 134:85973
TITLE: Preparation of substituted cyclopentane and cyclopentene compounds and certain intermediates
INVENTOR(S): Chand, Pooran; Elliott, Arthur J.

PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000558	A1	20010104	WO 2000-US17685	20000628
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1189862	A1	20020327	EP 2000-946871	20000628
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-140840P P 19990628
WO 2000-US17685 W 20000628
OTHER SOURCE(S): MARPAT 134:85973
GI



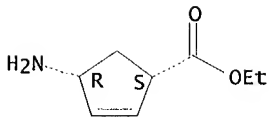
I

AB Cyclopentanes such as I were prepd. from cyclopentane-fused isoxazolines, which were obtained by reaction of nitrile oxides with cyclopentenes. Thus, a mixt. of 15 g Et c-4-[(tert-butoxycarbonyl)amino]-t-3-(2-propylbutyl)-4,5,6,6a-tetrahydro-2aH-cyclopent[d]isoxazole-6-r-carboxylate (II) in 120 mL EtOH/water/HOAc (1:1:1) contg. 1,5 g PtO2 was hydrogenated at 45 psi for 60 h to give 19 g (-)-t-3-(1-amino-2-propylpentyl)-c-4-[(tert-butoxycarbonyl)amino]-t-2-hydroxycyclopentane-r-1-carboxylate, which was acetylated by Ac2O in CH2Cl2 to give a 61% yield of I. The prepn. of II from 1-nitro-2-propylpentane, (-)-Et 4-[(tert-butoxycarbonyl)amino]cyclopentene-1-carboxylate, and PhNCO was described. The products were intended as neuraminidase inhibitors.

IT **229613-86-9P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(cyclopentanecarboxylate derivs. as neuraminidase inhibitors)

RN 229613-86-9 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, ethyl ester, hydrochloride, (1S,4R)- (9CI) (CA INDEX NAME)

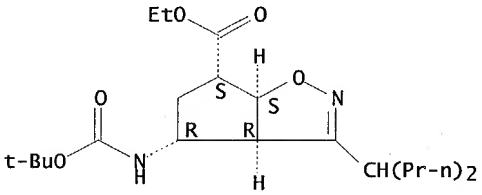
Absolute stereochemistry. Rotation (-).



● HCl

IT **316147-71-4P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(cyclopentanecarboxylate derivs. as neuraminidase inhibitors)
RN 316147-71-4 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:460384 CAPLUS
DOCUMENT NUMBER: 131:87678
TITLE: Preparation of substituted cyclopentane and cyclopentene compounds as neuraminidase inhibitors
INVENTOR(S): Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 196 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

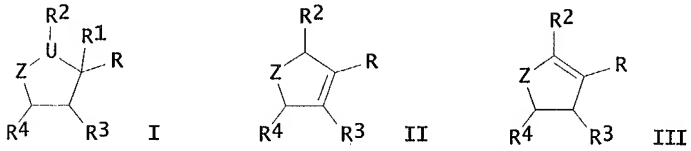
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933781	A1	19990708	WO 1998-US26871	19981217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2315262	AA	19990708	CA 1998-2315262	19981217
AU 9922001	A1	19990719	AU 1999-22001	19981217
ZA 9811595	A	20000619	ZA 1998-11595	19981217
EP 1040094	A1	20001004	EP 1998-966003	19981217

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

BR 9813480	A	20001010	BR 1998-13480		19981217
JP 2001527058	T2	20011225	JP 2000-526468		19981217
US 6562861	B1	20030513	US 2000-555131		20000525
NO 2000003084	A	20000814	NO 2000-3084		20000615
PRIORITY APPLN. INFO.:			US 1997-69956P	P	19971217
			US 1998-85252P	P	19980513
			WO 1998-US26871	W	19981217

OTHER SOURCE(S): MARPAT 131:87678

GI



I II III

AB Title compds. I-III wherein U is CH, O, or S; Z is mono- or di-substituted carbon; R is (CH2)nCO2H, (CH2)nSO3H, (CH2)nPO3H2, (CH2)nNO2, CH(SCH3)3, esters; R1 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl; RR1 is O; n is 0-4; R2 , R3 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl, haloalkyl; R4 is (CH2)nOH, (CH2)nNH2, substituted alkyl were prepd. as neuraminidase inhibitors. Thus, (1R,3R,4R,1'S)-(-)-(1'-acetylamino-2'-ethyl)butyl-4-(aminoimino)methylaminocyclopentan-1-carboxylic acid was prepd. and tested in vitro as neuraminidase inhibitor (IC50 < 1 .mu.M).

IT **74201-87-9P 77745-25-6P 130931-84-9P**
130931-85-0P 168683-02-1P 229613-83-6P
229613-86-9P 229613-87-0P 229613-88-1P
229613-89-2P 229613-90-5P 229613-91-6P
229613-92-7P 229613-93-8P 229613-94-9P
229613-95-0P 229613-96-1P 229613-97-2P
229613-98-3P 229613-99-4P 229614-00-0P
229614-01-1P 229614-02-2P 229614-03-3P
229614-04-4P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. of substituted cyclopentane and cyclopentene compds. as neuraminidase inhibitors)

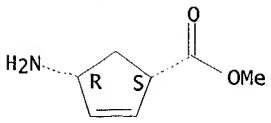
RN 74201-87-9 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, hydrochloride, (1R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

● HCl

RN 77745-25-6 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, methyl ester, hydrochloride, (1R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

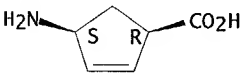
RN 130931-84-9 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, hydrochloride, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

● HCl

RN 130931-85-0 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, hydrochloride, (1R,4S)- (9CI) (CA INDEX NAME)

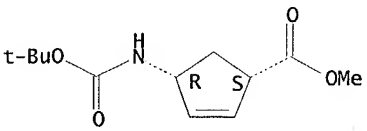
Absolute stereochemistry. Rotation (+).



● HCl

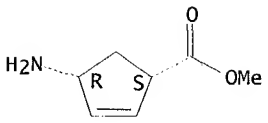
RN 168683-02-1 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 229613-83-6 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, methyl ester, hydrochloride, (1S,4R)- (9CI) (CA INDEX NAME)

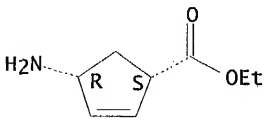
Absolute stereochemistry. Rotation (-).



● HCl

RN 229613-86-9 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, ethyl ester, hydrochloride, (1S,4R)- (9CI) (CA INDEX NAME)

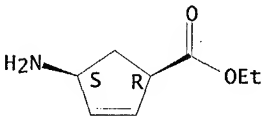
Absolute stereochemistry. Rotation (-).



● HCl

RN 229613-87-0 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, ethyl ester, hydrochloride, (1R,4S)- (9CI) (CA INDEX NAME)

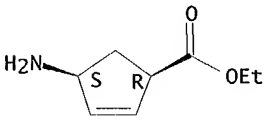
Absolute stereochemistry. Rotation (+).



● HCl

RN 229613-88-1 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-amino-, ethyl ester, hydrochloride, (1R,4S)-rel- (9CI) (CA INDEX NAME)

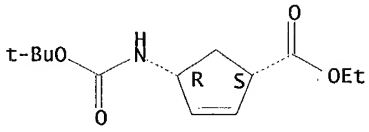
Relative stereochemistry.



● HCl

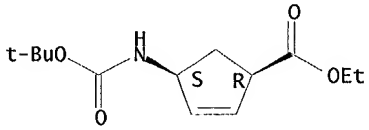
RN 229613-89-2 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, ethyl ester, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



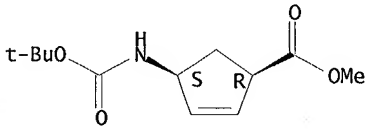
RN 229613-90-5 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, ethyl ester, (1R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



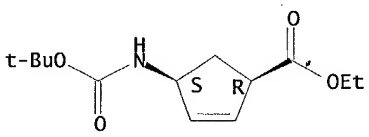
RN 229613-91-6 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



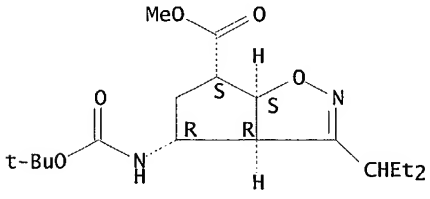
RN 229613-92-7 CAPLUS
CN 2-Cyclopentene-1-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-, ethyl ester, (1R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 229613-93-8 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

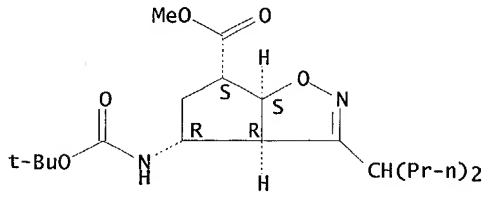
Absolute stereochemistry. Rotation (+).



RN 229613-94-9 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-

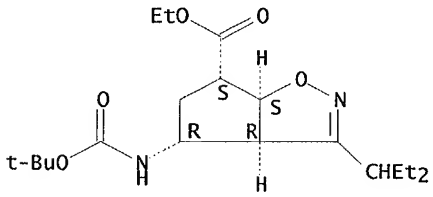
dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



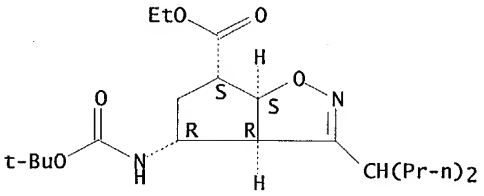
RN 229613-95-0 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, ethyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



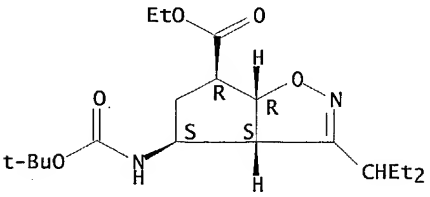
RN 229613-96-1 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, ethyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 229613-97-2 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, ethyl ester, (3aS,4S,6R,6aR)- (9CI) (CA INDEX NAME)

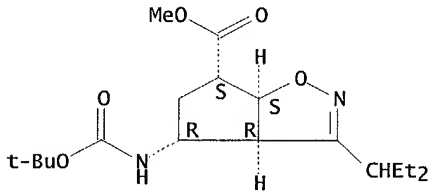
Absolute stereochemistry.



RN 229613-98-3 CAPLUS

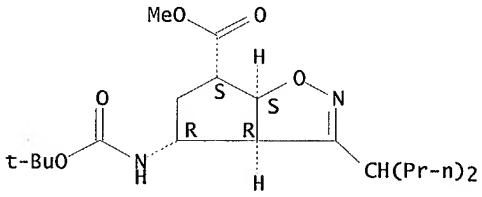
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



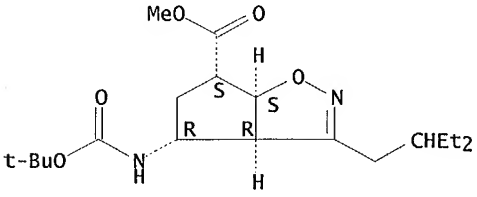
RN 229613-99-4 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



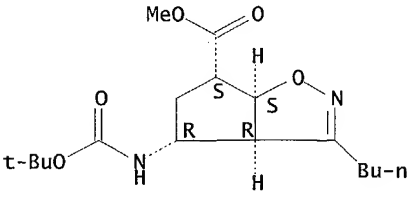
RN 229614-00-0 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(2-ethylbutyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



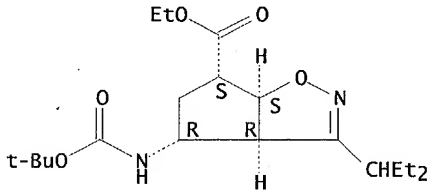
RN 229614-01-1 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 3-butyl-4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



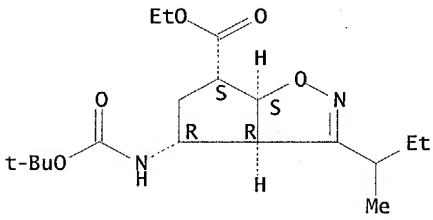
RN 229614-02-2 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



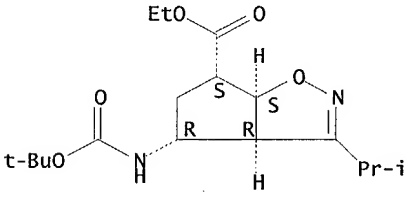
RN 229614-03-3 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-methylpropyl)-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 229614-04-4 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-methylethyl)-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

12 → 13

SOLOLA 10/019,217

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L13                 STR
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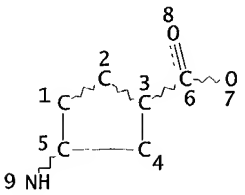
parent STR



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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   9

STEREO ATTRIBUTES: NONE
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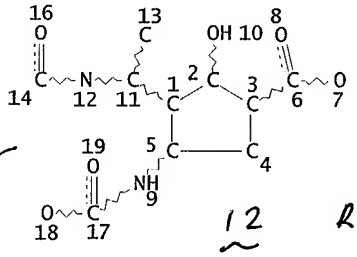

12 Reactant

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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS  18

STEREO ATTRIBUTES: NONE
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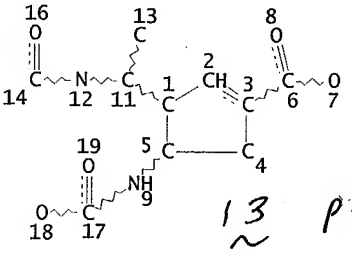

13 product

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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  17

STEREO ATTRIBUTES: NONE
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L40             3 SEA FILE=CAPLUS ABB=ON  PLU=ON  L23(L)(RCT OR RACT)/RL
L41             1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L30
L43             1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L40 AND L41
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12 as reactant

1 citation

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=> d ibib abs hitstr l43

L43  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         1999:460384  CAPLUS
DOCUMENT NUMBER:          131:87678
TITLE:                    Preparation of substituted cyclopentane and
                          cyclopentene compounds as neuraminidase inhibitors
INVENTOR(S):              Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John
                          A.
PATENT ASSIGNEE(S):       Biocryst Pharmaceuticals, Inc., USA
SOURCE:                   PCT Int. Appl., 196 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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     WO 9933781         A1   19990708       WO 1998-US26871  19981217
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             DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
             KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,
             MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
             TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
             FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
             CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     CA 2315262         AA   19990708       CA 1998-2315262  19981217
     AU 9922001         A1   19990719       AU 1999-22001    19981217
     ZA 9811595         A    20000619       ZA 1998-11595    19981217
     EP 1040094         A1   20001004       EP 1998-966003   19981217
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     BR 9813480         A    20001010       BR 1998-13480    19981217
     JP 2001527058      T2   20011225       JP 2000-526468   19981217
     US 6562861         B1   20030513       US 2000-555131   20000525
     NO 2000003084      A    20000814       NO 2000-3084     20000615
PRIORITY APPLN. INFO.:                   US 1997-69956P   P  19971217
                                         US 1998-85252P   P  19980513
                                         WO 1998-US26871  W  19981217
OTHER SOURCE(S):          MARPAT 131:87678
GI
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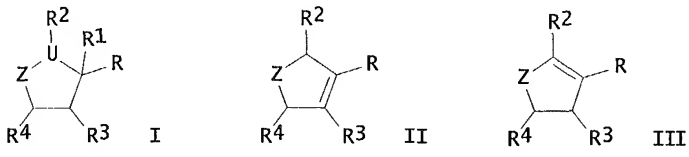


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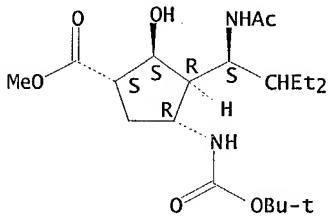
AB   Title compds. I-III wherein U is CH, O, or S; Z is mono- or di-substituted
     carbon; R is (CH2)nCO2H, (CH2)nSO3H, (CH2)nPO3H2, (CH2)nNO2, CH(SCH3)3,
     esters; R1 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl; RR1 is O; n is
     0-4; R2 , R3 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl, haloalkyl; R4 is
     (CH2)nOH, (CH2)nNH2, substituted alkyl were prepd. as neuraminidase
     inhibitors.  Thus, (1R,3R,4R,1'S)-(-)-(1'-acetylamino-2'-ethyl)butyl-4-
```

(aminoimino)methylaminocyclopentan-1-carboxylic acid was prepd. and tested in vitro as neuraminidase inhibitor (IC50 < 1 .mu.M).

IT **229614-05-5P 229614-06-6P 229614-07-7P**
229614-08-8P 229614-09-9P 229614-10-2P
229614-11-3P 229614-14-6P 229614-15-7P
229614-16-8P 229614-98-6P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. of substituted cyclopentane and cyclopentene compds. as neuraminidase inhibitors)

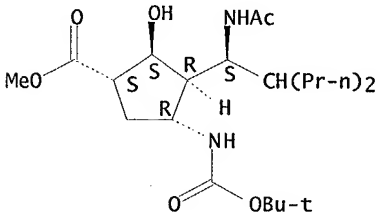
RN 229614-05-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



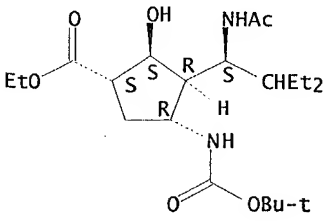
RN 229614-06-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 229614-07-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

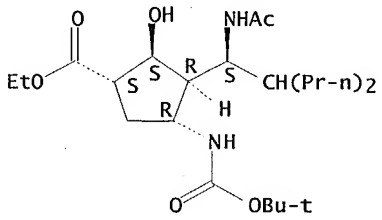
Absolute stereochemistry. Rotation (-).



RN 229614-08-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester,

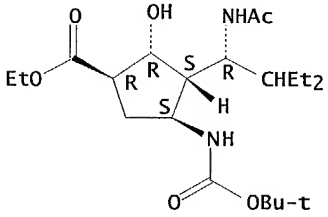
(1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



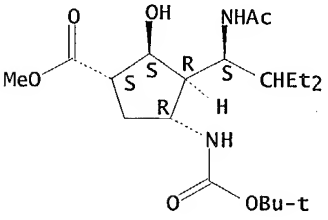
RN 229614-09-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



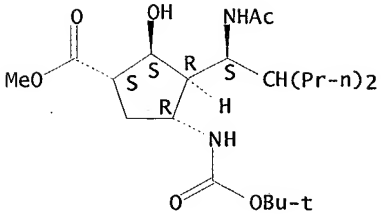
RN 229614-10-2 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



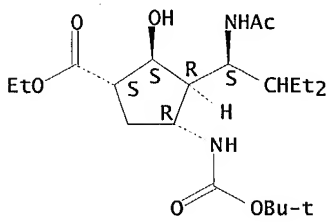
RN 229614-11-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



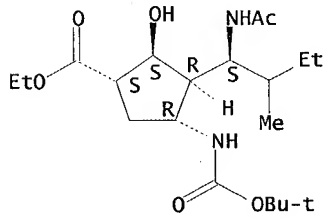
RN 229614-14-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



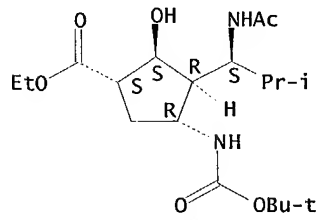
RN 229614-15-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-methylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 229614-16-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-methylpropyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

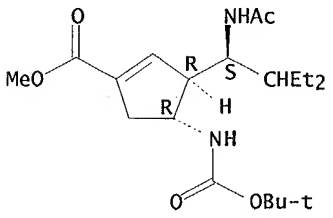
Relative stereochemistry.



RN 229614-98-6 CAPLUS

CN 1-Cyclopentene-1-carboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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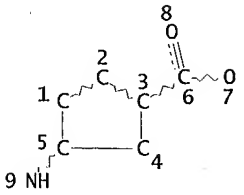
SOLOLA 10/019,217

=> d que l39
L13 STR parent STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
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L16 18 SEA FILE=REGISTRY ABB=ON PLU=ON L15 AND NOC3-C5/ES ≡
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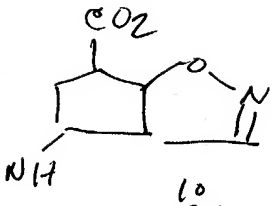

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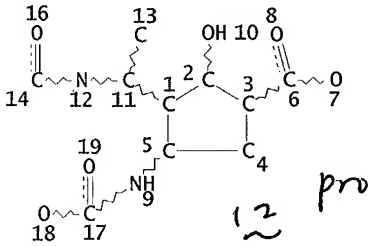

12

product

↑ reactant

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
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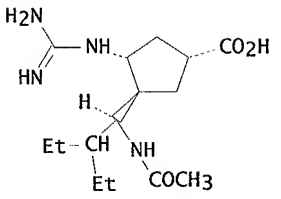
L37 5 SEA FILE=CAPLUS ABB=ON PLU=ON L23
L38 5 SEA FILE=CAPLUS ABB=ON PLU=ON L37(L)PREP/RL 12 as product
L39 3 SEA FILE=CAPLUS ABB=ON PLU=ON L36 AND L38
3 cites

=> d ibib abs hitstr l39 1-3

L39 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:787187 CAPLUS
DOCUMENT NUMBER: 136:69605
TITLE: Systematic Structure-Based Design and Stereoselective Synthesis of Novel Multi-Substituted Cyclopentane Derivatives with Potent Anti-influenza Activity
AUTHOR(S): Chand, Pooran; Kotian, Pravin L.; Dehghani, Ali; El-Kattan, Yahya; Lin, Tsu-Hsing; Hutchison, Tracy L.; Babu, Y. Sudhakar; Bantia, Shanta; Elliott, Arthur J.; Montgomery, John A.
CORPORATE SOURCE: BioCryst Pharmaceuticals Inc., Birmingham, AL, 35244, USA
SOURCE: Journal of Medicinal Chemistry (2001), 44(25),

4379-4392
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



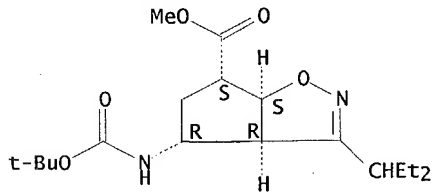
I

AB The design and synthesis of novel, orally active, potent, and selective inhibitors of influenza neuraminidase differing structurally from existing neuraminidase inhibitors are described. X-ray crystal structures of complexes of neuraminidase with known five- and six-membered ring inhibitors revealed that potent inhibition of the enzyme is detd. by the relative positions of the interacting inhibitor substituents (carboxylate, glycerol, acetamido, hydroxyl) rather than by the abs. position of the central ring. This led us to design potential neuraminidase inhibitors in which the cyclopentane ring served as a scaffold for substituents (carboxylate, guanidino, acetamido, alkyl) that would interact with the four binding pockets of the neuraminidase active site at least as effectively as those of the established six-membered ring inhibitors such as DANA, zanamivir, and oseltamivir. A mixt. of the isomers was prepd. initially. Protein crystallog. of inhibitor-enzyme complexes was used to screen mixts. of isomers in order to identify the most active stereoisomer. A synthetic route to the identified candidate cyclopentane I was developed, which featured (3+2) cycloaddn. of 2-ethylbutyronitrile oxide to Me (1S,4R)-4[(tert-butoxycarbonyl)amino]cyclopent-2-ene-1-carboxylate. Structures of the synthetic compds. were verified by NMR spectroscopy using nuclear Overhauser effect methodol. Wo new neuraminidase inhibitors discovered in this work, I has IC50 values vs neuraminidase from influenza A and B of <1 nM. These IC50 values are comparable or superior to those for zanamivir and oseltamivir, agents recently approved by the FDA for treatment of influenza.

IT **229613-93-8P 229614-05-5P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(systematic structure-based design and stereoselective synthesis of novel multi-substituted cyclopentane derivs. with potent anti-influenza activity)

RN 229613-93-8 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

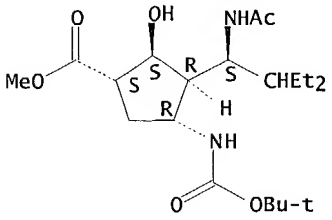
Absolute stereochemistry. Rotation (+).



RN 229614-05-5 CAPLUS

CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



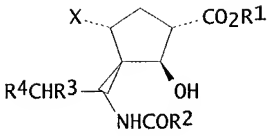
REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:12411 CAPLUS
DOCUMENT NUMBER: 134:71317
TITLE: Process for preparing substituted cyclopentane derivatives and their crystalline structures
INVENTOR(S): Abdel-Magid, Ahmed F.; Bichsel, Hans-Ulrich; Korey, Daniel J.; Laufer, Guenther G.; Lehto, Erja A.; Mattei, Sebastiano; Rey, Max; Schultz, Thomas W.; Maryanoff, Cynthia
PATENT ASSIGNEE(S): Ortho-McNeil Pharmaceutical, Inc., USA
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000571	A1	20010104	WO 2000-US16013	20000609
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
BR 2000011902	A	20020319	BR 2000-11902	20000609
EP 1214294	A1	20020619	EP 2000-942747	20000609
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003503384	T2	20030128	JP 2001-506983	20000609
US 2002061930	A1	20020523	US 2001-991753	20011126
US 6576786	B2	20030610		
NO 2001006389	A	20020221	NO 2001-6389	20011227

PRIORITY APPLN. INFO.: US 1999-141301P P 19990628
US 2000-590839 A1 20000609
WO 2000-US16013 W 20000609

OTHER SOURCE(S): CASREACT 134:71317; MARPAT 134:71317
GI



I

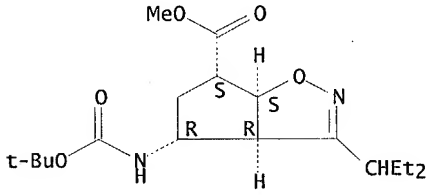
AB Substituted cyclopentane derivs. I [R1 = H, alkyl, cycloalkyl, aryl, aralkyl; R2 = H, alkyl, haloalkyl, aryl, cycloalkyl; R3, R4 = H, alkyl, alkylene, cycloalkyl, aryl; X = NHC(:NH)NH2] were prepd. E.g., (1S,2S,3R,4R,1'S)-(-)-3-[(1'-acetylamino-2'-ethyl)butyl]-4-[[(aminoimino)methyl]amino]-2-hydroxycyclopentane-1-carboxylic acid was prepd.

IT **229613-93-8P 316173-28-1P**
RL: **RCT (Reactant)**; SPN (Synthetic preparation); PREP (Preparation); **RACT (Reactant or reagent)**
(prepn. of substituted cyclopentane derivs.)

RN 229613-93-8 CAPLUS

CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



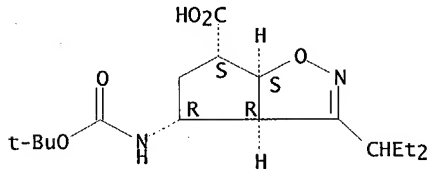
RN 316173-28-1 CAPLUS

CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, (3aR,4R,6S,6aS)-, compd. with 2-methyl-2-propanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

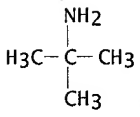
CRN 316173-27-0
CMF C17 H28 N2 O5

Absolute stereochemistry.



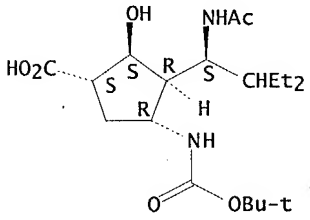
CM 2

CRN 75-64-9
CMF C4 H11 N



IT **316173-30-5P**
RL: SPN (Synthetic preparation); **PREP (Preparation)**
(prepn. of substituted cyclopentane derivs.)
RN 316173-30-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

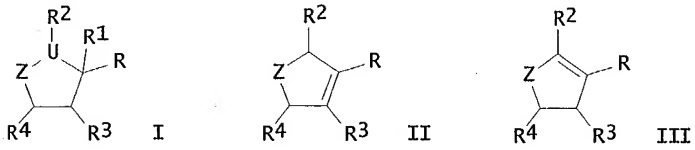


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L39 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:460384 CAPLUS
DOCUMENT NUMBER: 131:87678
TITLE: Preparation of substituted cyclopentane and cyclopentene compounds as neuraminidase inhibitors
INVENTOR(S): Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 196 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933781	A1	19990708	WO 1998-US26871	19981217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2315262	AA	19990708	CA 1998-2315262	19981217
AU 9922001	A1	19990719	AU 1999-22001	19981217
ZA 9811595	A	20000619	ZA 1998-11595	19981217
EP 1040094	A1	20001004	EP 1998-966003	19981217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9813480	A	20001010	BR 1998-13480	19981217
JP 2001527058	T2	20011225	JP 2000-526468	19981217

US 6562861 B1 20030513 US 2000-555131 20000525
NO 2000003084 A 20000814 NO 2000-3084 20000615
PRIORITY APPLN. INFO.: US 1997-69956P P 19971217
US 1998-85252P P 19980513
WO 1998-US26871 W 19981217
OTHER SOURCE(S): MARPAT 131:87678
GI



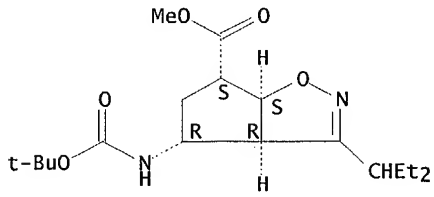
I II III

AB Title compds. I-III wherein U is CH, O, or S; Z is mono- or di-substituted carbon; R is (CH2)nCO2H, (CH2)nSO3H, (CH2)nPO3H2, (CH2)nNO2, CH(SCH3)3, esters; R1 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl; RR1 is O; n is 0-4; R2 , R3 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl, haloalkyl; R4 is (CH2)nOH, (CH2)nNH2, substituted alkyl were prepd. as neuraminidase inhibitors. Thus, (1R,3R,4R,1'S)-(-)-(1'-acetylamino-2'-ethyl)butyl-4-(aminoimino)methylaminocyclopentan-1-carboxylic acid was prepd. and tested in vitro as neuraminidase inhibitor (IC50 < 1 .mu.M).

IT **229613-93-8P 229613-94-9P 229613-95-0P**
229613-96-1P 229613-97-2P 229613-98-3P
229613-99-4P 229614-00-0P 229614-01-1P
229614-02-2P 229614-03-3P 229614-04-4P
229614-05-5P 229614-06-6P 229614-07-7P
229614-08-8P 229614-09-9P 229614-10-2P
229614-11-3P 229614-14-6P 229614-15-7P
229614-16-8P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. of substituted cyclopentane and cyclopentene compds. as neuraminidase inhibitors)

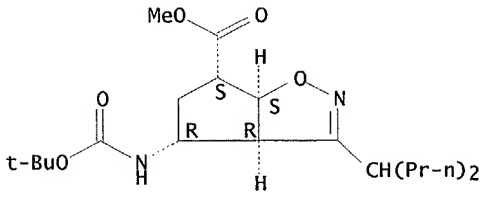
RN 229613-93-8 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



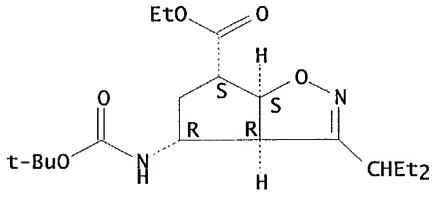
RN 229613-94-9 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, methyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



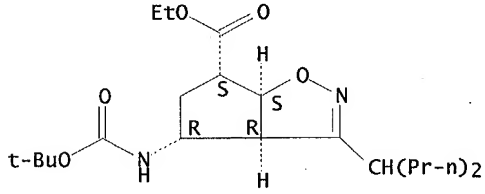
RN 229613-95-0 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, ethyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



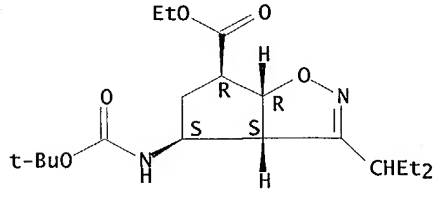
RN 229613-96-1 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, ethyl ester, (3aR,4R,6S,6aS)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



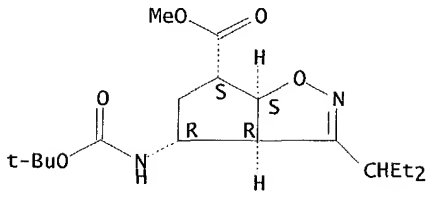
RN 229613-97-2 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, ethyl ester, (3aS,4S,6R,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



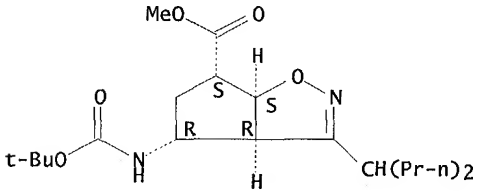
RN 229613-98-3 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



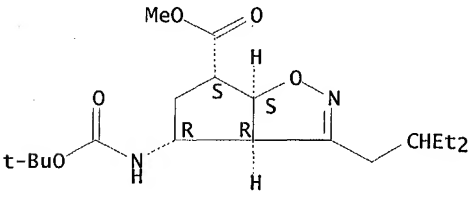
RN 229613-99-4 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-propylbutyl)-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



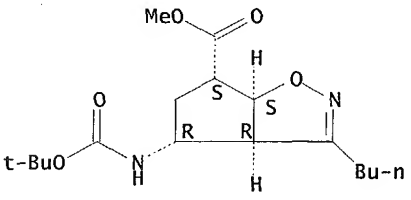
RN 229614-00-0 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(2-ethylbutyl)-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



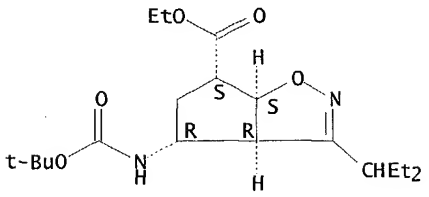
RN 229614-01-1 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 3-butyl-4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-, methyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



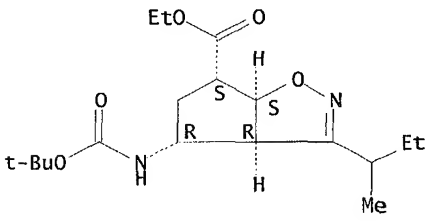
RN 229614-02-2 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3-(1-ethylpropyl)-3a,5,6,6a-tetrahydro-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



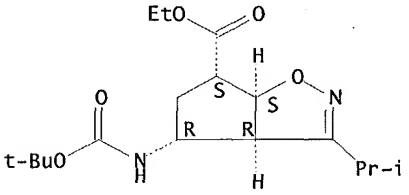
RN 229614-03-3 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-methylpropyl)-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



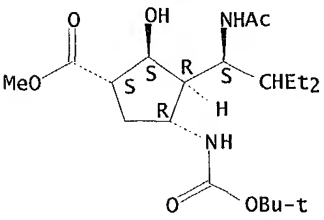
RN 229614-04-4 CAPLUS
CN 4H-Cyclopent[d]isoxazole-6-carboxylic acid, 4-[[(1,1-dimethylethoxy)carbonyl]amino]-3a,5,6,6a-tetrahydro-3-(1-methylethyl)-, ethyl ester, (3aR,4R,6S,6aS)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 229614-05-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

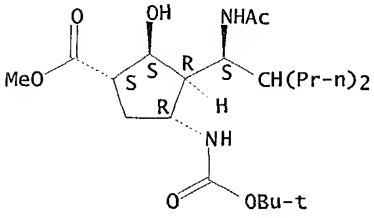
Absolute stereochemistry. Rotation (-).



RN 229614-06-6 CAPLUS

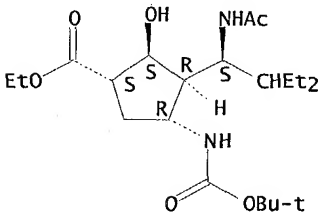
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



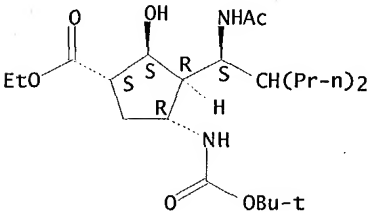
RN 229614-07-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



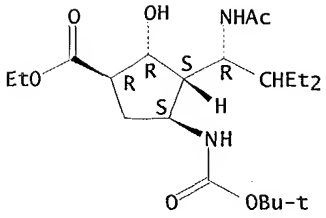
RN 229614-08-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



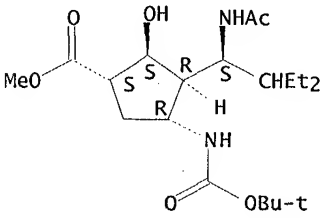
RN 229614-09-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



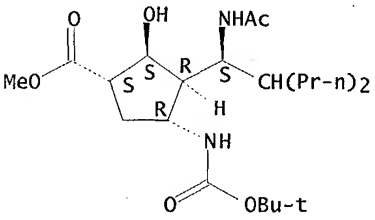
RN 229614-10-2 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



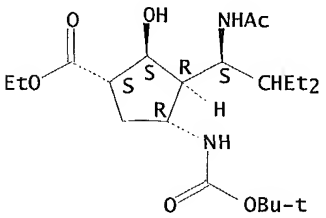
RN 229614-11-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 229614-14-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

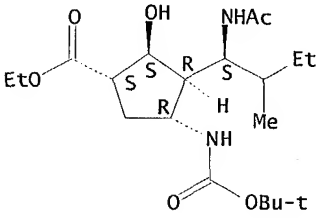
Relative stereochemistry.



RN 229614-15-7 CAPLUS

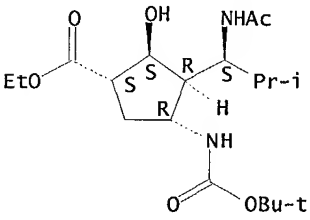
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-methylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



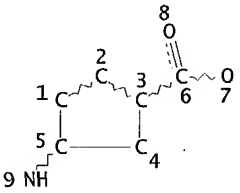
RN 229614-16-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-methylpropyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d que 146
L13 STR parent STR



NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
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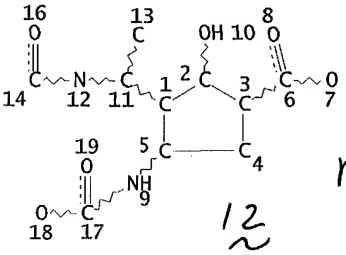
L21 STR

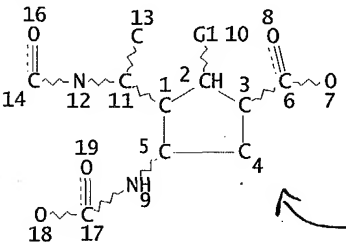


reactant 12

NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
L23 22 SEA FILE=REGISTRY SUB=L15 SSS FUL L21
L24 STR



product

converting OH group of 12 to F, OR, O-C(=O)-R, NH or NH-C(=O)-OR

non-H

p48-49 of claims

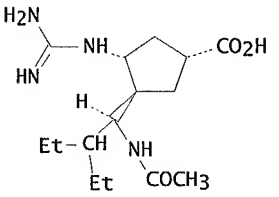
VAR G1=F/NH/20
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 20
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE
L26 11 SEA FILE=REGISTRY SUB=L15 SSS FUL L24
L40 3 SEA FILE=CAPLUS ABB=ON PLU=ON L23(L)(RCT OR RACT)/RL 12 as reactant
L45 4 SEA FILE=CAPLUS ABB=ON PLU=ON L26(L)PREP/RL
L46 3 SEA FILE=CAPLUS ABB=ON PLU=ON L40 AND L45 3 cites

=> d ibib abs hitstr l46 1-3

L46 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:787187 CAPLUS
DOCUMENT NUMBER: 136:69605
TITLE: Systematic Structure-Based Design and Stereoselective Synthesis of Novel Multi-Substituted Cyclopentane Derivatives with Potent Anti-influenza Activity
AUTHOR(S): Chand, Pooran; Kotian, Pravin L.; Dehghani, Ali; El-Kattan, Yahya; Lin, Tsu-Hsing; Hutchison, Tracy L.; Babu, Y. Sudhakar; Bantia, Shanta; Elliott, Arthur J.; Montgomery, John A.
CORPORATE SOURCE: BioCryst Pharmaceuticals Inc., Birmingham, AL, 35244, USA
SOURCE: Journal of Medicinal Chemistry (2001), 44(25), 4379-4392
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



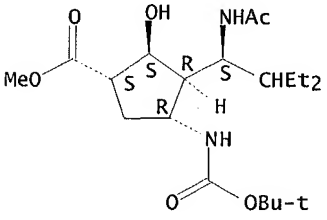
I

AB The design and synthesis of novel, orally active, potent, and selective inhibitors of influenza neuraminidase differing structurally from existing neuraminidase inhibitors are described. X-ray crystal structures of complexes of neuraminidase with known five- and six-membered ring inhibitors revealed that potent inhibition of the enzyme is detd. by the relative positions of the interacting inhibitor substituents (carboxylate, glycerol, acetamido, hydroxyl) rather than by the abs. position of the central ring. This led us to design potential neuraminidase inhibitors in which the cyclopentane ring served as a scaffold for substituents (carboxylate, guanidino, acetamido, alkyl) that would interact with the four binding pockets of the neuraminidase active site at least as effectively as those of the established six-membered ring inhibitors such as DANA, zanamivir, and oseltamivir. A mixt. of the isomers was prepd. initially. Protein crystallog. of inhibitor-enzyme complexes was used to screen mixts. of isomers in order to identify the most active stereoisomer. A synthetic route to the identified candidate cyclopentane I was developed, which featured (3+2) cycloaddn. of 2-ethylbutyronitrile oxide to Me (1S,4R)-4[(tert-butoxycarbonyl)amino]cyclopent-2-ene-1-carboxylate. Structures of the synthetic compds. were verified by NMR spectroscopy using nuclear Overhauser effect methodol. Wo new neuraminidase inhibitors discovered in this work, I has IC50 values vs neuraminidase from influenza A and B of <1 nM. These IC50 values are comparable or superior to those for zanamivir and oseltamivir, agents recently approved by the FDA for treatment of influenza.
IT **229614-05-5P 229614-61-3P**

RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(systematic structure-based design and stereoselective synthesis of novel multi-substituted cyclopentane derivs. with potent anti-influenza activity)

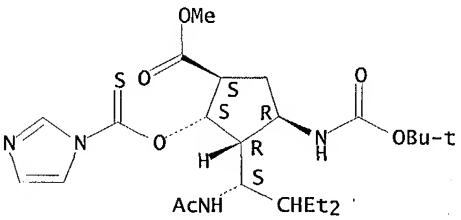
RN 229614-05-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 229614-61-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(1H-imidazol-1-ylthioxomethoxy)-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:635885 CAPLUS
DOCUMENT NUMBER: 135:210771
TITLE: Preparation of prodrugs of substituted cyclopentane and cyclopentene compounds useful as neuraminidase inhibitors
INVENTOR(S): Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.; Watts, Karen Bush; Hlasta, Dennis J.; Caldwell, Gary W.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 109 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001062242	A1	20010830	WO 2001-US5862	20010226

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,

LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2000-184666P P 20000224
OTHER SOURCE(S): MARPAT 135:210771
GI

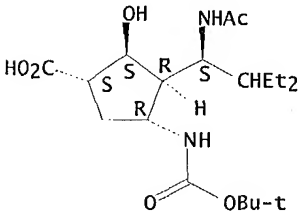
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [R1 = H, R5, (CH2)nOC(O)R5, (CH2)nOR5, (CH2)n-N-R6; R2-3 = H, (CH2)mOH, C(O)OR, C(O)R5, C(O)SR, (CH2)mC(O)NR5R5', OC(O)OR5, an amino acid and/or a dipeptide; R = R5, H, etc.; R4 = H, OH, OC(O)R5, OC(O)NR5R5', OC(O)OR5; R5-5' = H, alk(en/yn)yl, aryl, heterocycle, alkylaryl, cycloalkyl, CH2CO2alkyl; and wherein R5 can be (dialkyl)CO alkyl; R6 NR6 = phthalimido, etc.; R7-7' = alkyl, alkylaryl, cycloalkyl; R8 = (halo)alkyl; n = 1 - 5; m = 0 - 4] were prepd. Over 40 synthetic examples were prepd. For instance, reaction of II.bul.CF3CO2H and isothiourea III (prepn. given) (DMF, Et3N, HgCl2, 2 h) followed by hydrogenation (MeOHaq, HCl, H2/10% Pd-C @ 40 psi, 16 h) provided IV (68% yield, 2 steps). The synthesis of II (and derivs.) is claimed (II was disclosed in prior art). Compds. I are prodrugs that inhibit influenza virus neuraminidase (no data) and may be used for preventing, treating or ameliorating viral and bacterial infections.

IT **316173-30-5P 357447-47-3P 357447-49-5P**
357447-53-1P 357447-93-9P 357447-99-5P
357448-03-4P 357448-07-8P 357448-11-4P
357448-15-8P 357448-19-2P 357448-23-8P
357448-27-2P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(intermediate; synthesis of guanidino-cyclopentyl-carboxy derivs. (prodrugs) as neuraminidase inhibitors)

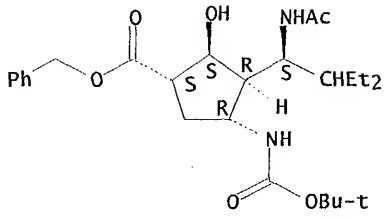
RN 316173-30-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



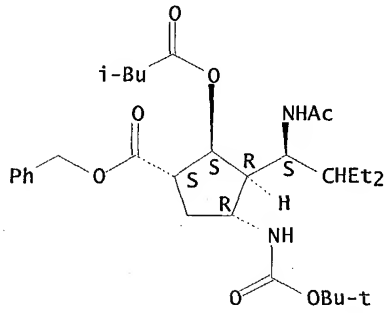
RN 357447-47-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, phenylmethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



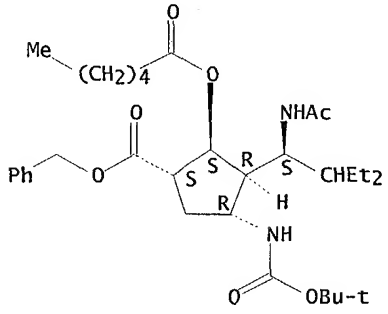
RN 357447-49-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(3-methyl-1-oxobutoxy)-, phenylmethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 357447-53-1 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-[(1-oxohexyl)oxy]-, phenylmethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

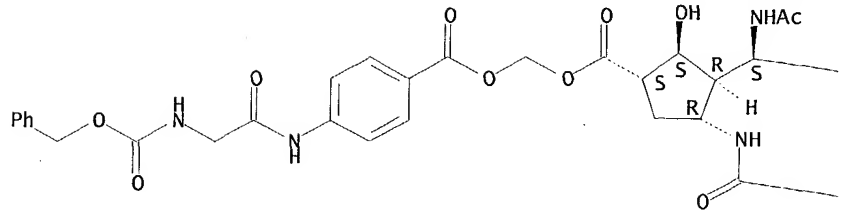
Absolute stereochemistry. Rotation (-).



RN 357447-93-9 CAPLUS
CN Benzoic acid, 4-[[[[(phenylmethoxy)carbonyl]amino]acetyl]amino]-, [[[(1S,2S,3R,4R)-3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxycyclopentyl]carbonyl]oxy]methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A



PAGE 1-B

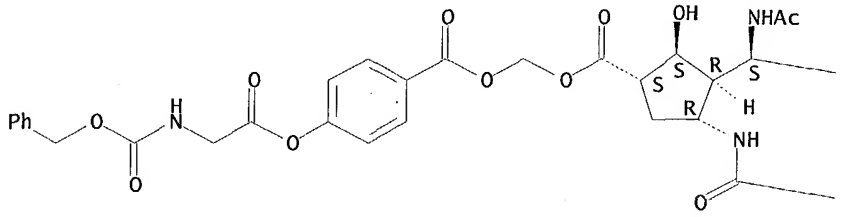
—CHEt2

—OBu-t

RN 357447-99-5 CAPLUS
CN Glycine, N-[(phenylmethoxy)carbonyl]-, 4-[[[[[(1S,2S,3R,4R)-3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxycyclopentyl]carbonyl]oxy]methoxy]carbonyl]phenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

PAGE 1-A



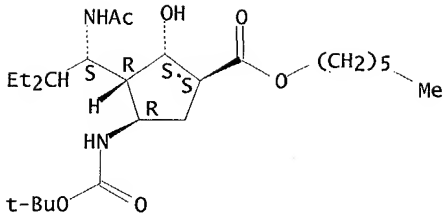
PAGE 1-B

—CHEt2

—OBu-t

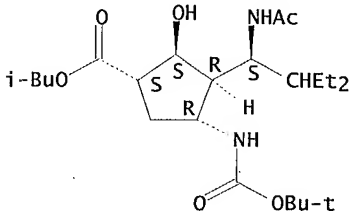
RN 357448-03-4 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, hexyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



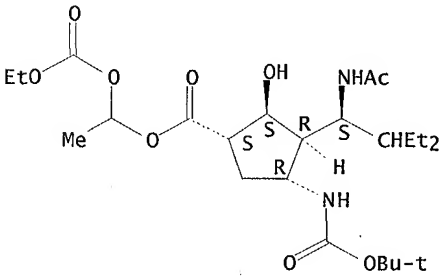
RN 357448-07-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, 2-methylpropyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



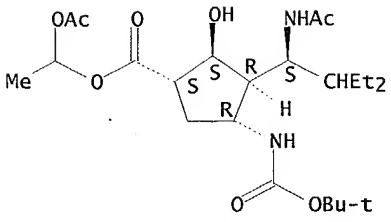
RN 357448-11-4 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, 1-[(ethoxycarbonyl)oxy]ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



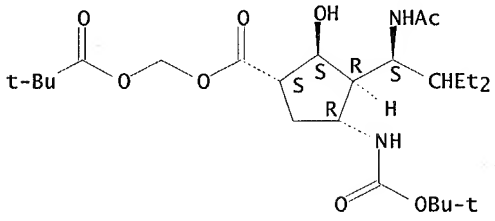
RN 357448-15-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, 1-(acetyloxy)ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



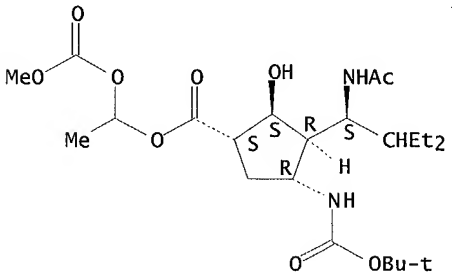
RN 357448-19-2 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, (2,2-dimethyl-1-oxopropoxy)methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



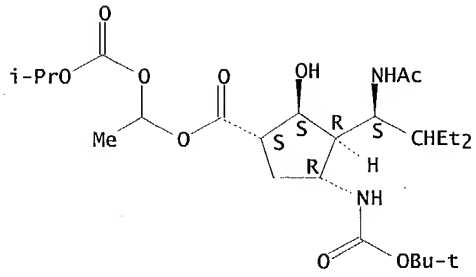
RN 357448-23-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, 1-[(methoxycarbonyl)oxy]ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



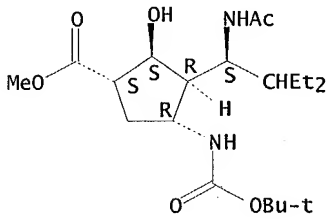
RN 357448-27-2 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, 1-[[(1-methylethoxy)carbonyl]oxy]ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



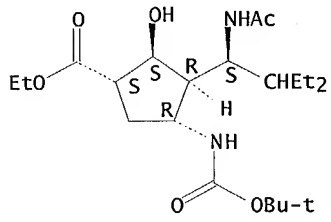
IT **229614-05-5 229614-07-7**
RL: **RCT (Reactant); RACT (Reactant or reagent)**
(reactant; synthesis of guanidino-cyclopentyl-carboxy derivs. (prodrugs) as neuraminidase inhibitors)
RN 229614-05-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 229614-07-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L46 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:460384 CAPLUS
DOCUMENT NUMBER: 131:87678
TITLE: Preparation of substituted cyclopentane and cyclopentene compounds as neuraminidase inhibitors
INVENTOR(S): Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 196 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933781	A1	19990708	WO 1998-US26871	19981217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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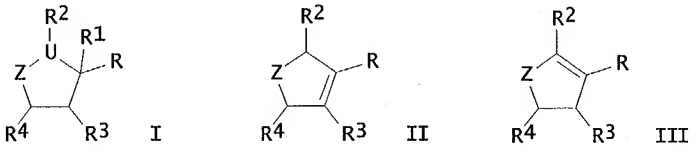
AU 9922001	A1	19990719	AU 1999-22001	19981217
ZA 9811595	A	20000619	ZA 1998-11595	19981217
EP 1040094	A1	20001004	EP 1998-966003	19981217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9813480	A	20001010	BR 1998-13480	19981217
JP 2001527058	T2	20011225	JP 2000-526468	19981217
US 6562861	B1	20030513	US 2000-555131	20000525
NO 2000003084	A	20000814	NO 2000-3084	20000615

PRIORITY APPLN. INFO.: US 1997-69956P P 19971217
US 1998-85252P P 19980513
WO 1998-US26871 W 19981217

OTHER SOURCE(S): MARPAT 131:87678
GI



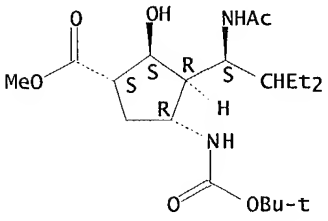
AB Title compds. I-III wherein U is CH, O, or S; Z is mono- or di-substituted carbon; R is (CH2)nCO2H, (CH2)nSO3H, (CH2)nPO3H2, (CH2)nNO2, CH(SCH3)3, esters; R1 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl; RR1 is O; n is 0-4; R2 , R3 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl, haloalkyl; R4 is (CH2)nOH, (CH2)nNH2, substituted alkyl were prepd. as neuraminidase inhibitors. Thus, (1R,3R,4R,1'S)-(-)-(1'-acetylamino-2'-ethyl)butyl-4-(aminoimino)methylaminocyclopentan-1-carboxylic acid was prepd. and tested in vitro as neuraminidase inhibitor (IC50 < 1 .mu.M).

IT **229614-05-5P 229614-06-6P 229614-07-7P**
229614-08-8P 229614-09-9P 229614-10-2P
229614-11-3P 229614-12-4P 229614-13-5P
229614-14-6P 229614-15-7P 229614-16-8P
229614-61-3P 229614-62-4P 229614-63-5P
229614-64-6P 229614-65-7P 229614-97-5P
RL: **RCT (Reactant)**; SPN (Synthetic preparation); **PREP (Preparation)**; **RACT (Reactant or reagent)**
(prepn. of substituted cyclopentane and cyclopentene compds. as neuraminidase inhibitors)

RN 229614-05-5 CAPLUS

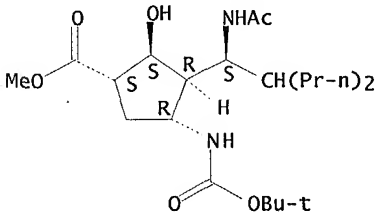
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



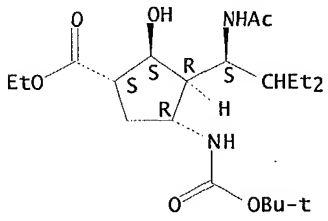
RN 229614-06-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



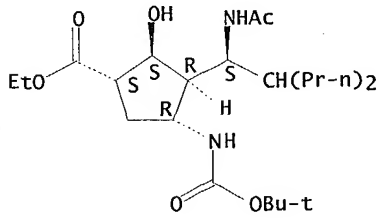
RN 229614-07-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



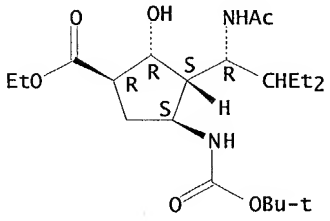
RN 229614-08-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



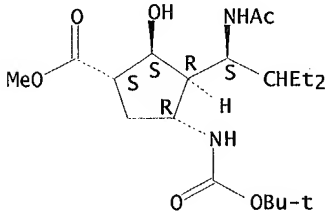
RN 229614-09-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



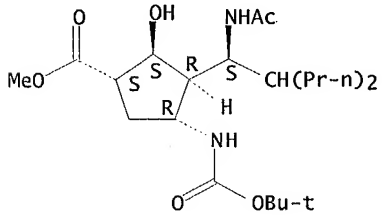
RN 229614-10-2 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



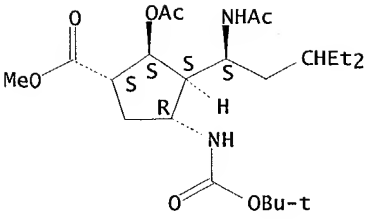
RN 229614-11-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



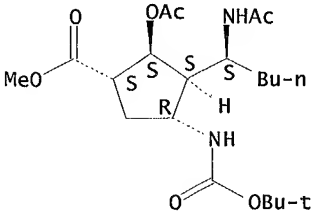
RN 229614-12-4 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-3-ethylpentyl]-2-(acetyloxy)-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



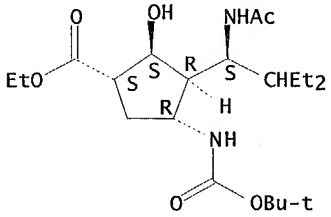
RN 229614-13-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)pentyl]-2-(acetyloxy)-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



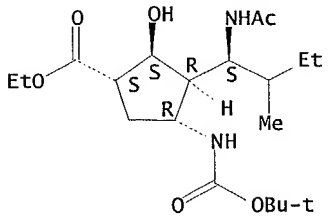
RN 229614-14-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 229614-15-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-methylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

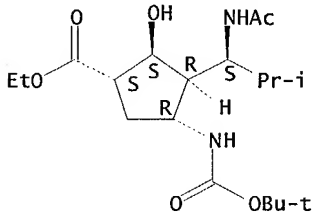
Relative stereochemistry.



RN 229614-16-8 CAPLUS

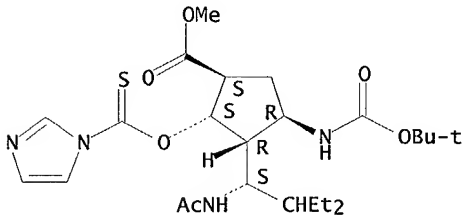
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-methylpropyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-hydroxy-, ethyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



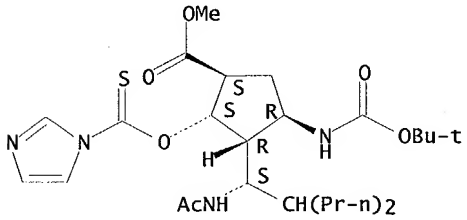
RN 229614-61-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(1H-imidazol-1-ylthioxomethoxy)-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



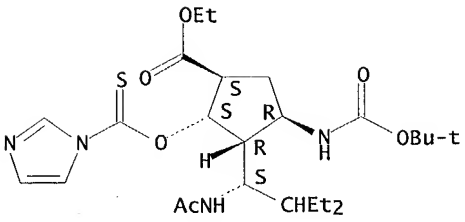
RN 229614-62-4 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(1H-imidazol-1-ylthioxomethoxy)-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



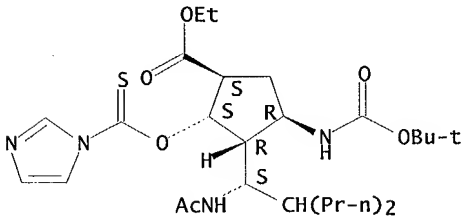
RN 229614-63-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(1H-imidazol-1-ylthioxomethoxy)-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



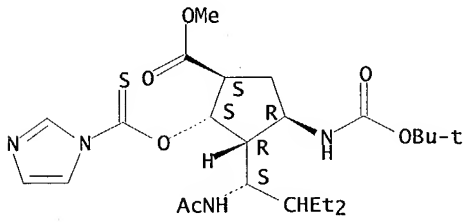
RN 229614-64-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(1H-imidazol-1-ylthioxomethoxy)-, ethyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



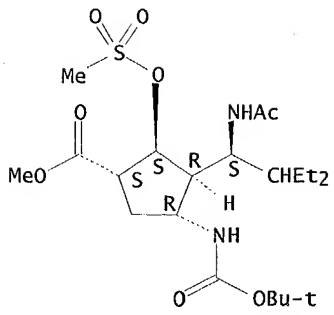
RN 229614-65-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-(1H-imidazol-1-ylthioxomethoxy)-, methyl ester, (1R,2R,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

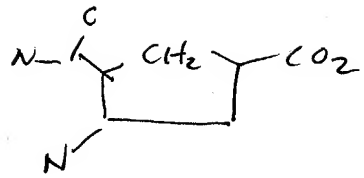


RN 229614-97-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-2-[(methylsulfonyl)oxy]-, methyl ester, (1S,2S,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



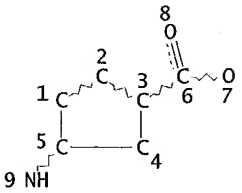
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

preparation of 

SOLOLA 10/019,217

=> D QUE L57
L13 STR

parent STR



from anything

It wasn't clear to me if this cpd was coming from 10 or 12, so I left the search to its preparation from any thing

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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE
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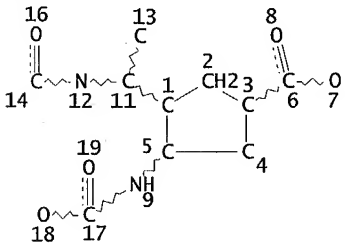
L54 STR



1a A = H

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DEFAULT ECLEVEL IS LIMITED

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RSPEC I
NUMBER OF NODES IS 17

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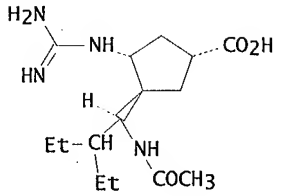
L56 4 SEA FILE=CAPLUS ABB=ON PLU=ON L55
L57 4 SEA FILE=CAPLUS ABB=ON PLU=ON L56(L)PREP/RL 4 cites

=> d ibib abs hitstr L57 1-4

L57 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:787187 CAPLUS
DOCUMENT NUMBER: 136:69605
TITLE: Systematic Structure-Based Design and Stereoselective Synthesis of Novel Multi-Substituted Cyclopentane Derivatives with Potent Anti-influenza Activity
AUTHOR(S): Chand, Pooran; Kotian, Pravin L.; Dehghani, Ali; El-Kattan, Yahya; Lin, Tsu-Hsing; Hutchison, Tracy L.; Babu, Y. Sudhakar; Bantia, Shanta; Elliott, Arthur J.; Montgomery, John A.
CORPORATE SOURCE: BioCryst Pharmaceuticals Inc., Birmingham, AL, 35244, USA
SOURCE: Journal of Medicinal Chemistry (2001), 44(25), 4379-4392
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal
LANGUAGE: English
GI



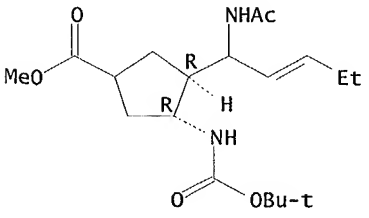
I

AB The design and synthesis of novel, orally active, potent, and selective inhibitors of influenza neuraminidase differing structurally from existing neuraminidase inhibitors are described. X-ray crystal structures of complexes of neuraminidase with known five- and six-membered ring inhibitors revealed that potent inhibition of the enzyme is detd. by the relative positions of the interacting inhibitor substituents (carboxylate, glycerol, acetamido, hydroxyl) rather than by the abs. position of the central ring. This led us to design potential neuraminidase inhibitors in which the cyclopentane ring served as a scaffold for substituents (carboxylate, guanidino, acetamido, alkyl) that would interact with the four binding pockets of the neuraminidase active site at least as effectively as those of the established six-membered ring inhibitors such as DANA, zanamivir, and oseltamivir. A mixt. of the isomers was prepd. initially. Protein crystallog. of inhibitor-enzyme complexes was used to screen mixts. of isomers in order to identify the most active stereoisomer. A synthetic route to the identified candidate cyclopentane I was developed, which featured (3+2) cycloaddn. of 2-ethylbutyronitrile oxide to Me (1S,4R)-4[(tert-butoxycarbonyl)amino]cyclopent-2-ene-1-carboxylate. Structures of the synthetic compds. were verified by NMR spectroscopy using nuclear Overhauser effect methodol. Wo new neuraminidase inhibitors discovered in this work, I has IC50 values vs neuraminidase from influenza A and B of <1 nM. These IC50 values are comparable or superior to those for zanamivir and oseltamivir, agents recently approved by the FDA for treatment of influenza.

IT **201001-80-1P 229614-66-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(systematic structure-based design and stereoselective synthesis of novel multi-substituted cyclopentane derivs. with potent anti-influenza activity)

RN 201001-80-1 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-pentenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4R)-rel- (9CI) (CA INDEX NAME)

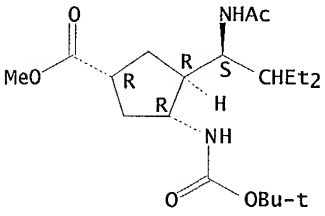
Relative stereochemistry.
Double bond geometry unknown.



RN 229614-66-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-

[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

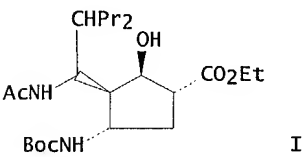


REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 2001:12400 CAPLUS
DOCUMENT NUMBER: 134:85973
TITLE: Preparation of substituted cyclopentane and cyclopentene compounds and certain intermediates
INVENTOR(S): Chand, Pooran; Elliott, Arthur J.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000558	A1	20010104	WO 2000-US17685	20000628
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1189862	A1	20020327	EP 2000-946871	20000628
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: US 1999-140840P P 19990628
WO 2000-US17685 W 20000628
OTHER SOURCE(S): MARPAT 134:85973
GI



I

AB Cyclopentanes such as I were prepd. from cyclopentane-fused isoxazolines, which were obtained by reaction of nitrile oxides with cyclopentenes. Thus, a mixt. of 15 g Et c-4-[(tert-butoxycarbonyl)amino]-t-3-(2-propylbutyl)-4,5,6,6a-tetrahydro-2aH-cyclopent[d]isoxazole-6-r-carboxylate

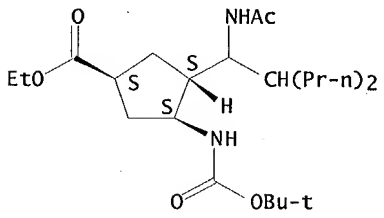
(II) in 120 mL EtOH/water/HOAc (1:1:1) contg. 1,5 g PtO2 was hydrogenated at 45 psi for 60 h to give 19 g (-)-t-3-(1-amino-2-propylpentyl)-c-4-[(tert-butoxycarbonyl)amino]-t-2-hydroxycyclopentane-r-1-carboxylate, which was acetylated by Ac2O in CH2Cl2 to give a 61% yield of I. The prepn. of II from 1-nitro-2-propylpentane, (-)-Et 4-[(tert-butoxycarbonyl)amino]cyclopentene-1-carboxylate, and PhNCO was described. The products were intended as neuraminidase inhibitors.

IT **316147-78-1P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)
(cyclopentanecarboxylate derivs. as neuraminidase inhibitors)

RN 316147-78-1 CAPLUS

CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, ethyl ester, (1R,3R,4R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

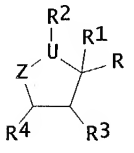


REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1999:460384 CAPLUS
DOCUMENT NUMBER: 131:87678
TITLE: Preparation of substituted cyclopentane and cyclopentene compounds as neuraminidase inhibitors
INVENTOR(S): Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 196 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933781	A1	19990708	WO 1998-US26871	19981217
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2315262	AA	19990708	CA 1998-2315262	19981217
AU 9922001	A1	19990719	AU 1999-22001	19981217
ZA 9811595	A	20000619	ZA 1998-11595	19981217
EP 1040094	A1	20001004	EP 1998-966003	19981217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9813480	A	20001010	BR 1998-13480	19981217
JP 2001527058	T2	20011225	JP 2000-526468	19981217

US 6562861 B1 20030513 US 2000-555131 20000525
NO 2000003084 A 20000814 NO 2000-3084 20000615
PRIORITY APPLN. INFO.: US 1997-69956P P 19971217
US 1998-85252P P 19980513
WO 1998-US26871 W 19981217
OTHER SOURCE(S): MARPAT 131:87678
GI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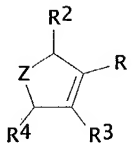
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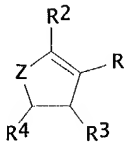
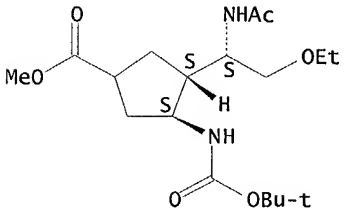

III

AB Title compds. I-III wherein U is CH, O, or S; Z is mono- or di-substituted carbon; R is (CH2)nCO2H, (CH2)nSO3H, (CH2)nPO3H2, (CH2)nNO2, CH(SCH3)3, esters; R1 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl; RR1 is O; n is 0-4; R2 , R3 is H, hydroxyalkyl, aminoalkyl, alkoxyalkyl, haloalkyl; R4 is (CH2)nOH, (CH2)nNH2, substituted alkyl were prepd. as neuraminidase inhibitors. Thus, (1R,3R,4R,1'S)-(-)-(1'-acetylamino-2'-ethyl)butyl-4-(aminoimino)methylaminocyclopentan-1-carboxylic acid was prepd. and tested in vitro as neuraminidase inhibitor (IC50 < 1 .mu.M).

IT **229612-95-7P 229613-02-9P 229613-06-3P**
229613-15-4P 229613-16-5P 229614-66-8P
229614-67-9P 229614-68-0P 229614-69-1P
229614-70-4P
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(prepn. of substituted cyclopentane and cyclopentene compds. as neuraminidase inhibitors)

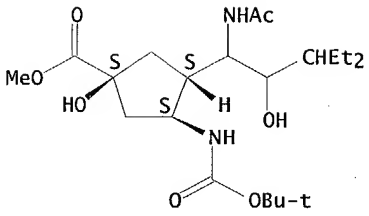
RN 229612-95-7 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethoxyethyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



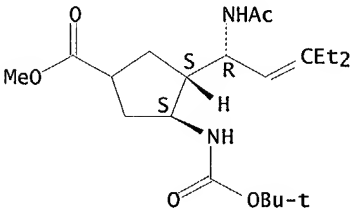
RN 229613-02-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-3-ethyl-2-hydroxypentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-1-hydroxy-, methyl ester, (1R,3R,4R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



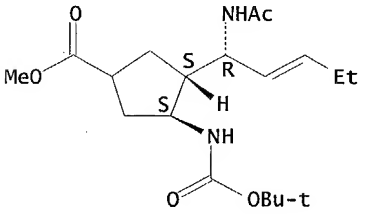
RN 229613-06-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-3-ethyl-2-pentenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



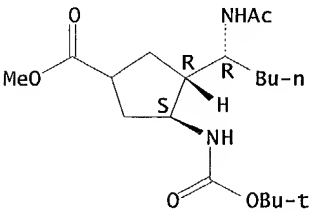
RN 229613-15-4 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-pentenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry unknown.



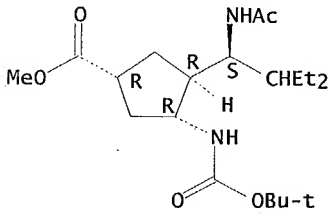
RN 229613-16-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)pentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



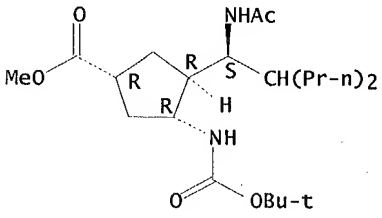
RN 229614-66-8 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



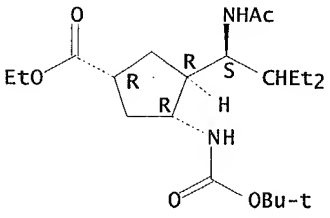
RN 229614-67-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



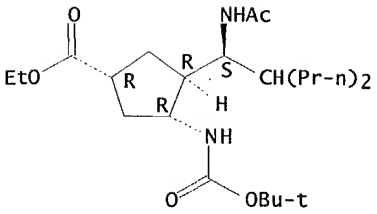
RN 229614-68-0 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, ethyl ester, (1R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



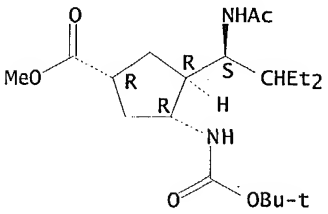
RN 229614-69-1 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1S)-1-(acetylamino)-2-propylpentyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, ethyl ester, (1R,3R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 229614-70-4 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-ethylbutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (1S,3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L57 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER: 1998:13805 CAPLUS
DOCUMENT NUMBER: 128:101850
TITLE: Preparation of substituted cyclopentanes as influenza virus neuraminidase inhibitors
INVENTOR(S): Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.
PATENT ASSIGNEE(S): Biocryst Pharmaceuticals, Inc., USA; Babu, Yarlagadda S.; Chand, Pooran; Montgomery, John A.
SOURCE: PCT Int. Appl., 206 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9747194	A1	19971218	WO 1997-US9309	19970613
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2258217	AA	19971218	CA 1997-2258217	19970613
AU 9734750	A1	19980107	AU 1997-34750	19970613
AU 723360	B2	20000824		
EP 933993	A1	19990811	EP 1997-931014	19970613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1227466	A	19990901	CN 1997-197248	19970613

JP 2000505088	T2	20000425	JP 1998-501649		19970613
NZ 333437	A	20000526	NZ 1997-333437		19970613
BR 9711095	A	20010717	BR 1997-11095		19970613
NO 9805821	A	19990210	NO 1998-5821		19981211
KR 2000016669	A	20000325	KR 1998-710269		19981214
US 6410594	B1	20020625	US 1999-202351		19990609
PRIORITY APPLN. INFO.:			US 1996-19930P	P	19960614
			US 1997-44010P	P	19970502
			WO 1997-US9309	W	19970613

OTHER SOURCE(S): MARPAT 128:101850
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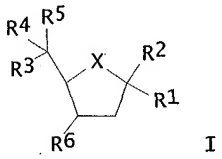


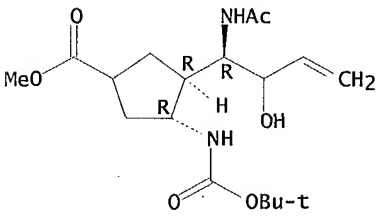
I

AB Title compds. I (X = O, S, CH2; R1 = H, OH, NH2, alkoxy; R2 = H, CO2H, SO3H, PO3H2, NO2, ester; R3, R4 = independently H, ester, ether, aminoalkyl, amide, alkyl; R5 = H, NHCOR7, NHCSR7, NHSO2R7, CONHR7, SO2NHR7, CH2SO2R7; R6 = H, hydroxyalkyl, aminoalkyl, cyanoalkyl, azidoalkyl; R7 = H, alkyl, cycloalkyl, CF3) were prepd. as influenza virus neuraminidase inhibitors. Compds. I are influenza virus neuraminidase inhibitors and can be used in treating patients infected with influenza virus. Thus, compds. I [R1 = R3 = R4 = H, R2 = CO2H; R5 = NHAc; R6 = NHC(NH)NH2] was prepd. and its inhibition of influenza virus neuraminidase (IC50 = 115 .mu.M) is reported, other derivs. inhibition IC50 ranged from 0.041 to 3800 .mu.M.

IT **201000-79-5P 201000-81-9P 201001-13-0P**
201001-20-9P 201001-21-0P 201001-80-1P
201338-11-6P 201338-14-9P 201338-15-0P
201338-17-2P 201338-18-3P
RL: RCT (Reactant); SPN (Synthetic preparation); **PREP (Preparation)**; RACT (Reactant or reagent)
(prepn. of substituted cyclopentanes as influenza virus neuraminidase inhibitors)

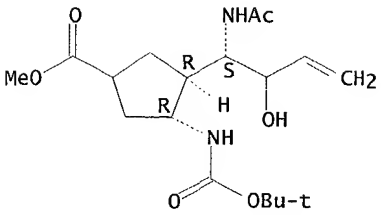
RN 201000-79-5 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-hydroxy-3-butenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, [3R(1R),4R]-rel-[partial]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



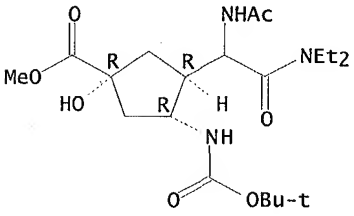
RN 201000-81-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2-hydroxy-3-butenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



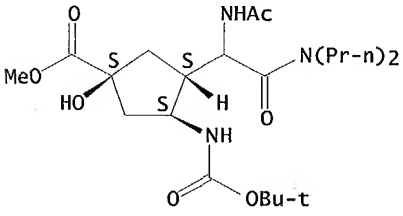
RN 201001-13-0 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-(diethylamino)-2-oxoethyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-1-hydroxy-, methyl ester, (1.alpha.,3.beta.,4.alpha.)-[partial]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



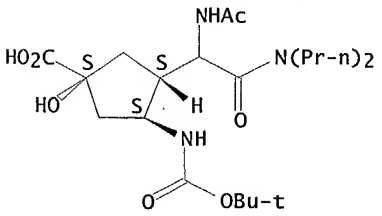
RN 201001-20-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-(dipropylamino)-2-oxoethyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-1-hydroxy-, methyl ester, (1.alpha.,3.beta.,4.alpha.)-[partial]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 201001-21-0 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-(dipropylamino)-2-oxoethyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-1-hydroxy-, (1.alpha.,3.beta.,4.alpha.)-[partial]- (9CI) (CA INDEX NAME)

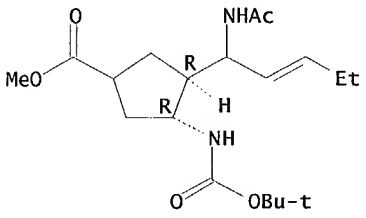
Relative stereochemistry.



RN 201001-80-1 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-pentenyl]-4-[[(1,1-

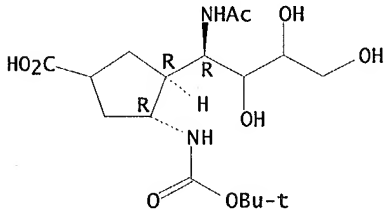
dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4R)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry unknown.



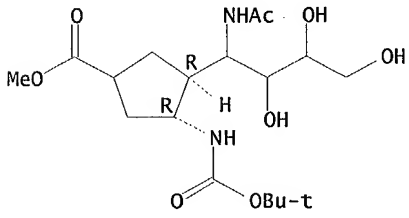
RN 201338-11-6 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2,3,4-trihydroxybutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, [3R(1R),4R]-rel-[partial]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



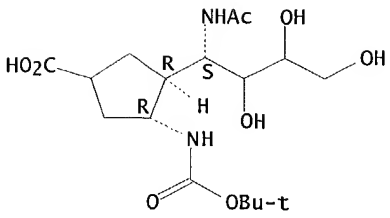
RN 201338-14-9 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2,3,4-trihydroxybutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4R)-rel-[partial]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



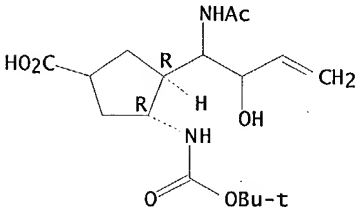
RN 201338-15-0 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[(1R)-1-(acetylamino)-2,3,4-trihydroxybutyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, (3S,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



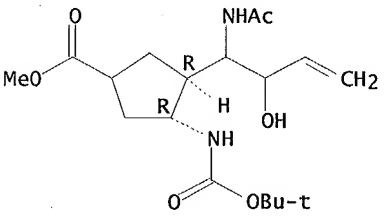
RN 201338-17-2 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-hydroxy-3-butenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, (3R,4R)-rel-[partial]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 201338-18-3 CAPLUS
CN Cyclopentanecarboxylic acid, 3-[1-(acetylamino)-2-hydroxy-3-butenyl]-4-[[(1,1-dimethylethoxy)carbonyl]amino]-, methyl ester, (3R,4R)-rel-[partial]- (9CI) (CA INDEX NAME)

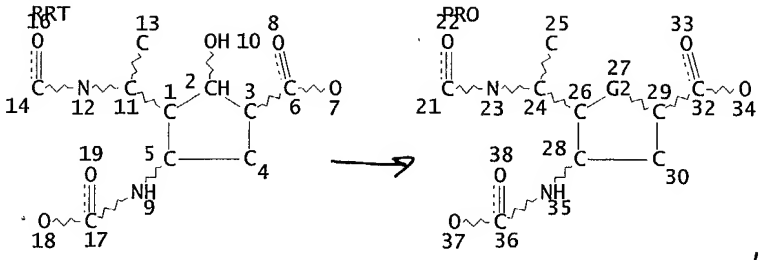
Relative stereochemistry.



CASReact

SOLOLA 10/019,217

=> D QUE L50
L48 STR



C~H @39 40
CH~G1 @41 42

VAR G1=F/NH/20
VAR G2=41/39
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 20
CONNECT IS E2 RC AT 39
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

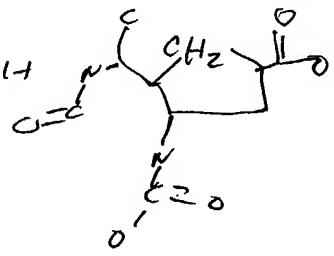
GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 40

STEREO ATTRIBUTES: NONE
L50 0 SEA FILE=CASREACT SSS FUL L48 (0 REACTIONS)

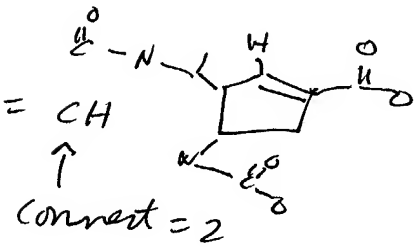
no cites

for the product

when G2 = C-H



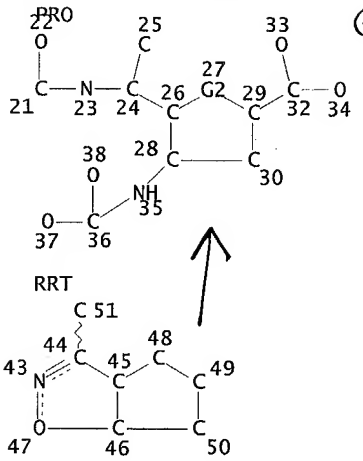
when G2 = CH

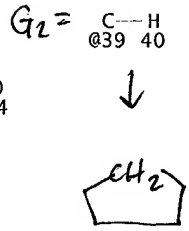


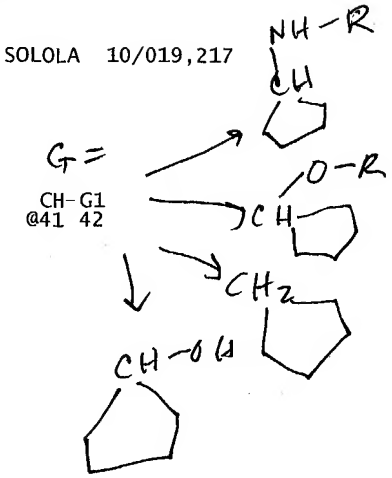
Connect = 2

Cas react

=> D QUE L53
L52 STR







RRT

VAR G1=H/F/NH/O
VAR G2=41/39
NODE ATTRIBUTES:
CONNECT IS E2 RC AT 39
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE
L53 0 SEA FILE=CASREACT SSS FUL L52 (0 REACTIONS) no cites